

ONTARIO MINISTRY OF ENVIRONMENT



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## OPERATING SUMMARY

TOWN OF

# ALLISTON

## WATER POLLUTION CONTROL PLANT

TD  
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.A56  
A45  
1974  
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**1974**

Alliston : water pollution control  
plant.  
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Ontario

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ALLISTON

WATER POLLUTION CONTROL PLANT

MINISTRY OF THE ENVIRONMENT

1974 ANNUAL OPERATING SUMMARY

prepared by

Plant Performance Unit

TECHNICAL SERVICES BRANCH

T. Cross, Director



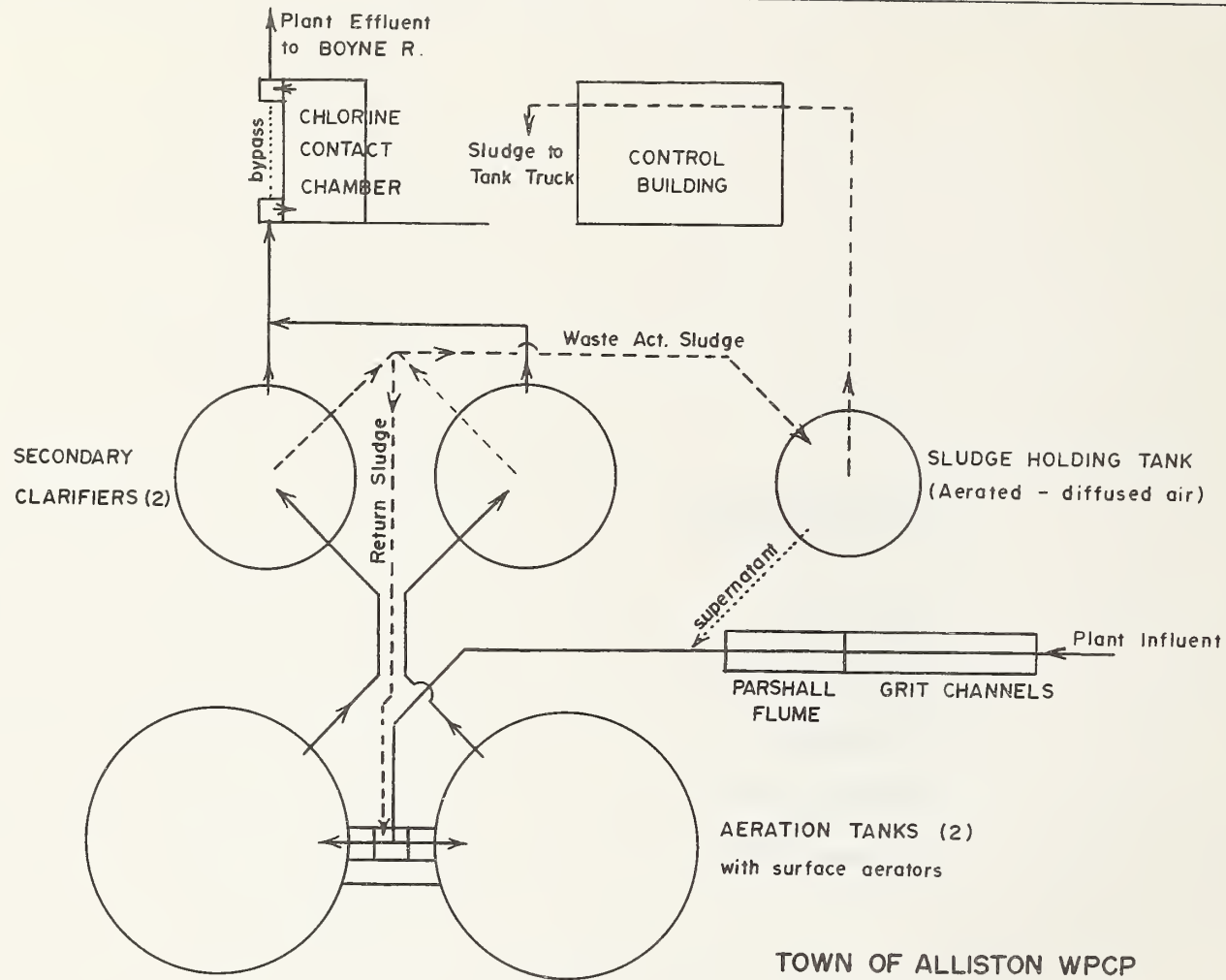
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## DESIGN DATA

### ALLISTON (T) WPCP

PROJECT NO. 1-0074-67

Design Capacity 0.86 MGD

Design BOD 155 mg/l

### PRETREATMENT

#### GRIT CHANNELS:

Two, each 2.5' x 25.0' x 2.5' swd

Detn: 1.6 min at Des. MGD

#### COMMINUTOR:

SALA 15" 37.5 Rpm powered by  
3/4 HP motor

#### BAR SCREEN:

in one Grit channel

### BIOLOGICAL TREATMENT

#### AERATION TANKS:

Two, 58.0' dia. x 14.0' swd

Volume: (total) 461,800 I. gal. Detn: 12.9 hr.

Aerators: Two AMES-CROSTA type - 60  
with 25 HP motor.

#### SECONDARY CLARIFIERS:

35.0' dia x 10.0' swd

Volume (total) 124,800 I. gal. Detn: 3.5 hr.

Overflow rate 450 gpd 1 ft<sup>2</sup>.

### CHLORINE CONTACT CHAMBER:

5 passes, each pass 3.6' x 15.0' x 6.75' swd

Volume (total) 11370 I. gal. Detn: 19 min.

Chlorinator: W & T model A-741

### SLUDGE DISPOSAL

#### SLUDGE HOLDING TANK:

16.0' dia. x 16.0' swd

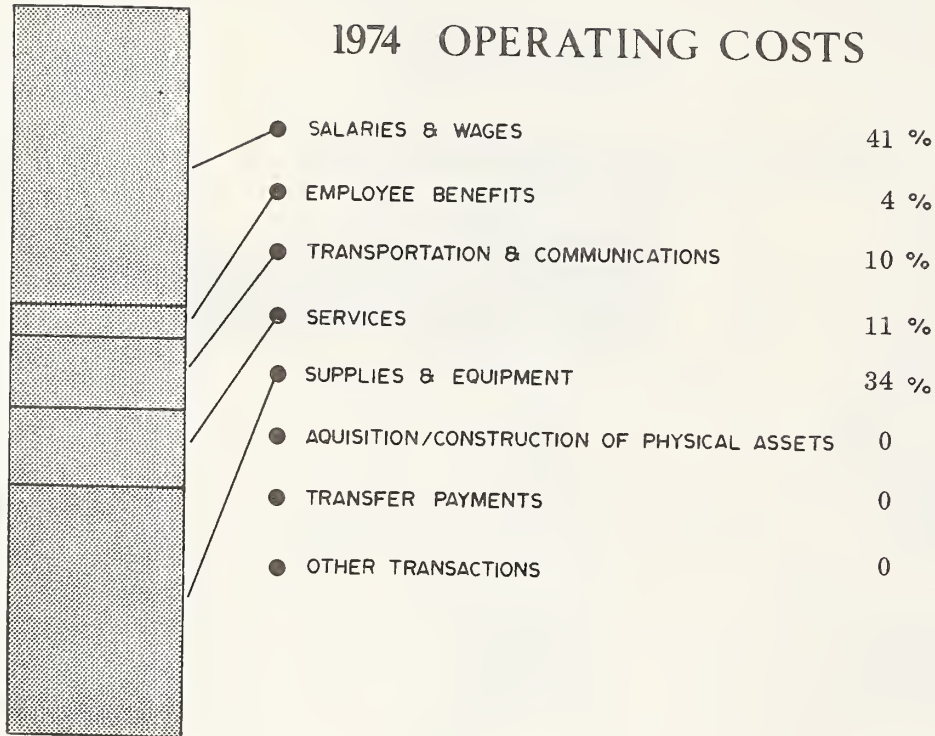
Volume 21,200 I. gal.

Sludge pump: CARTER Series 800 plunger  
75 USGPM at 60' TDH powered by 3 HP motor.

Blower: SUTORBILT Mod. 3HV13

# ANNUAL COSTS

## 1974 OPERATING COSTS



## YEARLY OPERATING COSTS

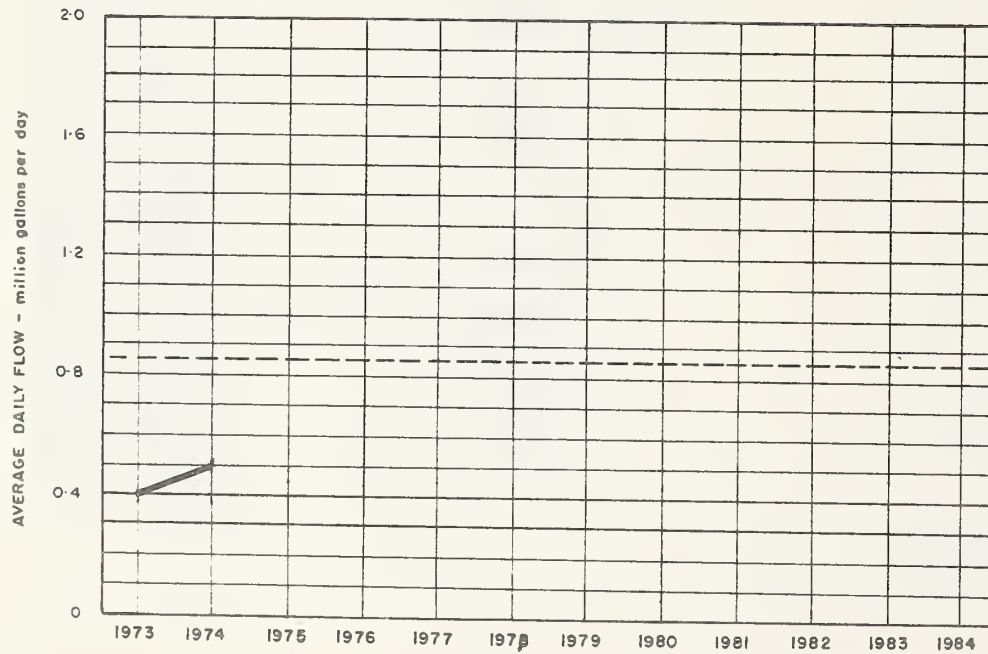
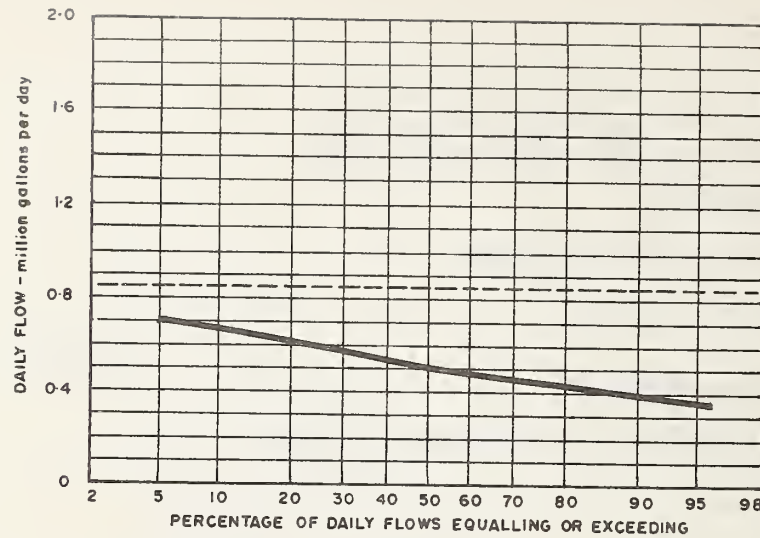
YEAR	SEWAGE TREATED in million gallons	TOTAL OPERATING COSTS	UNIT COSTS	
			\$/M G	¢/lb BOD
1974	186	52137	281	16



# OPERATING EXPENDITURES

Regular Staff	\$ 20790	\$
Casual (Unclassified) Staff	603	
TOTAL SALARIES AND WAGES		21393
TOTAL EMPLOYEE BENEFITS		2290
TOTAL TRANSPORTATION AND COMMUNICATIONS		4969
Insurance	376	
Sludge Haulage	4661	
Repairs and Maintenance	233	
Other Services	344	
TOTAL SERVICES		5614
Machinery and Equipment	6500	
Chemicals	1947	
Utilities	6299	
Other Supplies and Equipment	3125	
TOTAL SUPPLIES AND EQUIPMENT		17871
TOTAL AQUISITION/CONSTRUCTION OF PHYSICAL ASSETS		
TOTAL TRANSFER PAYMENTS		
OTHER TRANSACTIONS		
GRAND TOTAL	GRAND TOTAL	\$ 52137

# PROCESS DATA FLOWS

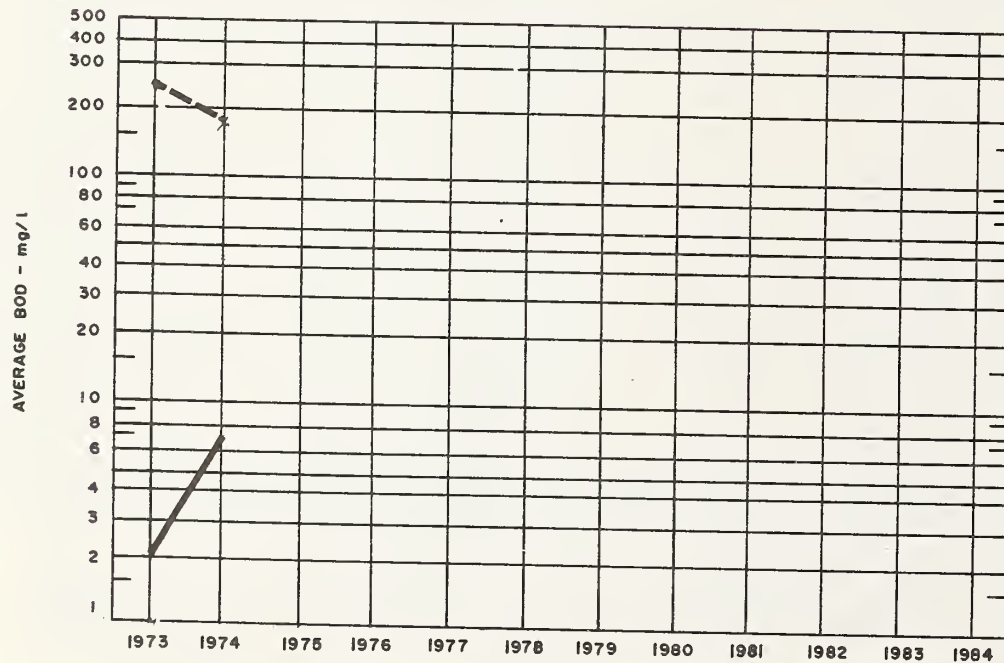
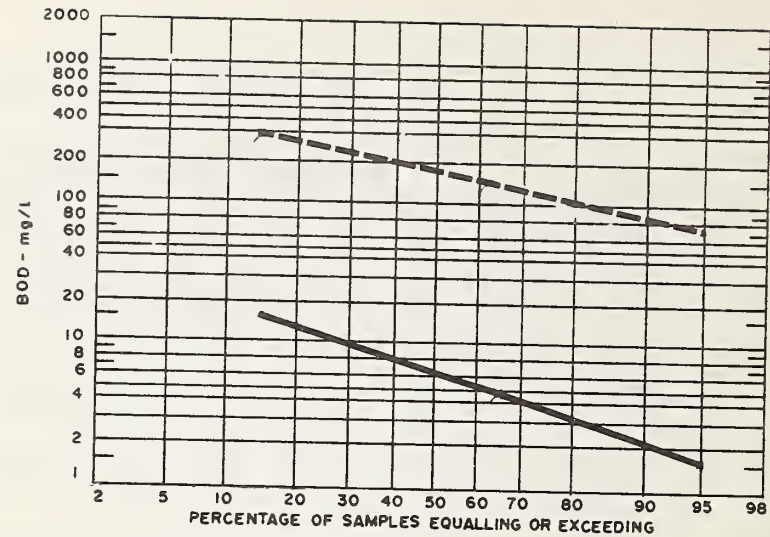


DESIGN CAPACITY - - - - -

# PLANT PERFORMANCE

MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				PHOSPHORUS	
	TOTAL FLOW	AVERAGE DAY	MAXIMUM DAY	INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT
	million gallons	mil. gal	mgd	mg/l	mg/l	%	10 <sup>3</sup> pounds	mg/l	mg/l	%	10 <sup>3</sup> pounds	mg/l P	mg/l P
JAN	14.9	.48	1.10	138	7	95	19.5	145	25	83	17.8	6.6	2.3
FEB	13.3	.47	1.20	210	9	96	26.6	155	45	71	14.6	7.6	2.9
MAR	16.9	.55	1.70	220	15	93	34.6	100	30	70	11.8	8.0	4.0
APR	15.2	.51	.80	95	13	86	12.5	88	33	63	8.4	5.8	3.2
MAY	17.2	.56	1.00	230	13	94	37.5	183	33	82	26.0	5.4	4.2
JUNE	15.9	.53	.66	155	6	96	23.7	130	25	81	16.7	26.2	5.7
JULY	16.1	.52	.74	220	3	99	34.9	250	15	94	37.8	26.0	3.4
AUG	16.6	.54	.97	130	2	98	21.2	170	40	76	21.6	19.0	5.0
SEPT	14.8	.49	.67	170	5	97	24.4	185	15	92	25.2	8.5	3.6
OCT	14.9	.48	.63	270	4	99	39.6	158	15	91	21.3	7.5	5.4
NOV	15.6	.52	.95	170	5	97	25.7	195	33	83	25.3	4.1	4.1
DEC	14.1	.45	.60	320	3	99	44.7	155	15	90	19.7	9.7	6.0
TOTAL	185.5	-	-	-	-	-	335.8	-	-	-	243.0	-	-
AVG.	15.5	.51	MAXIMUM 1.70	188	7	96	28.0	158	27	83	20.2	9.9	4.0
No. of Samples	-	-	-	20	20	-	-	20	20	-	-	20	19

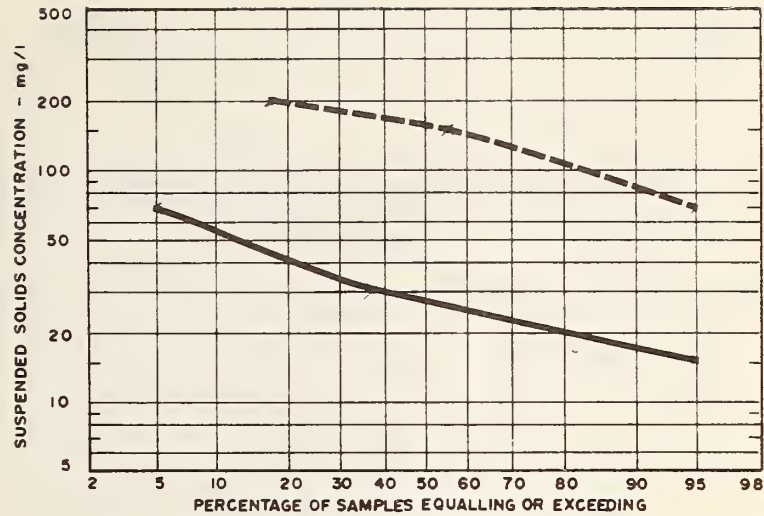
# BIOCHEMICAL OXYGEN DEMAND



PLANT INFLUENT      - - - - -

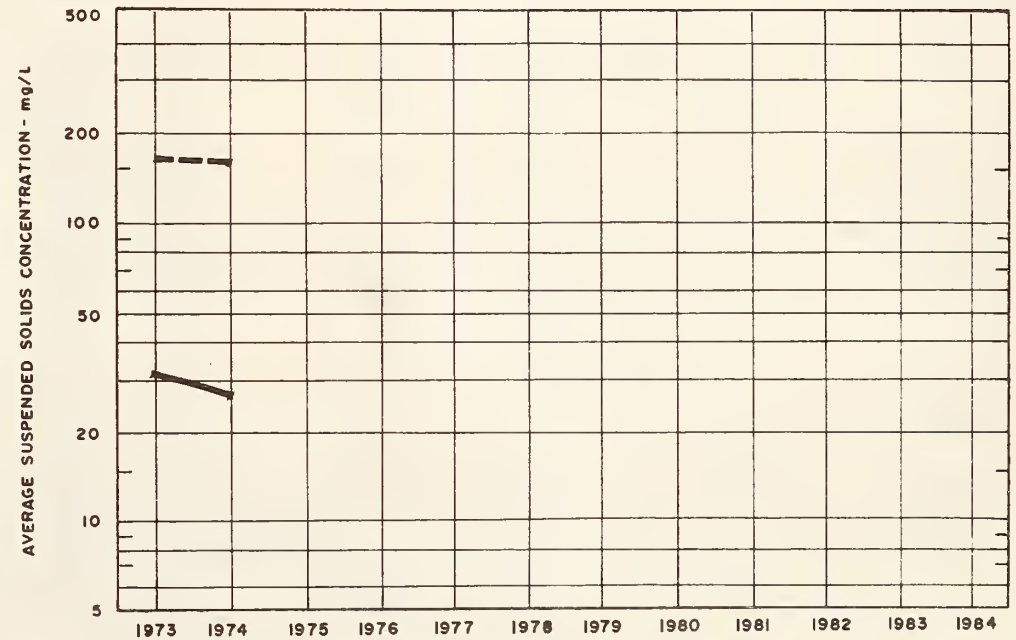
PLANT EFFLUENT      —————

# SUSPENDED SOLIDS

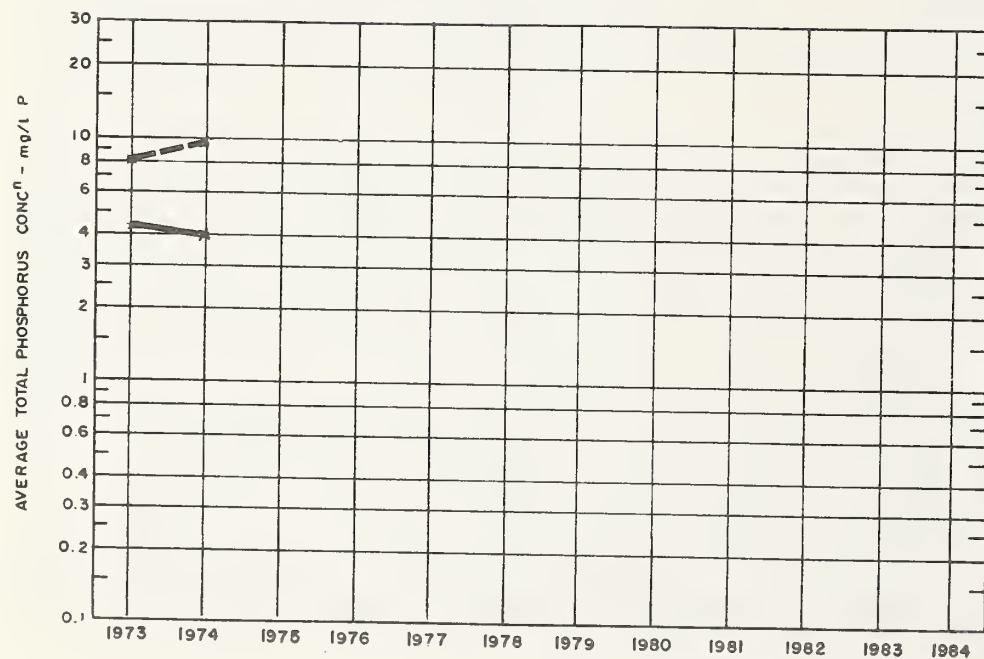
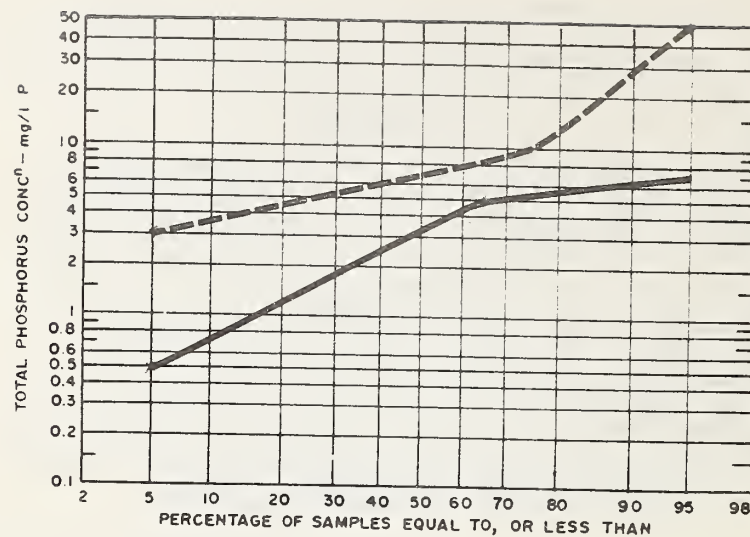


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# PHOSPHORUS



PLANT INFLUENT -----  
PLANT EFFLUENT —————



## TREATMENT DATA

MONTH	GRIT	CHLORINATION		AERATION			WASTE SLUDGE			AEROBIC DIGESTER			
	QUANTITY REMOVED cubic feet	Cl <sub>2</sub> USED pounds	AVG. DOSAGE mg/l	MLSS CONC mg/l	F/M day <sup>-1</sup>	AIR USED $\frac{1000 \text{ ft}^3}{\text{lb BOD}}$	QUANTITY 10 <sup>3</sup> gallons	SUSPENDED SOLIDS mg/l	VOL. SOLIDS %	QUANTITY REMOVED 10 <sup>3</sup> gallons	SUSPENDED SOLIDS mg/l	VOL. SOLIDS %	AMOUNT HAULED cubic yards
JAN	13	524	3.5	6300	.02					17.5			104
FEB	14	329	2.5	6300	.03					18.4			109
MAR	33	532	3.1	4400	.06		7.2	14000		15.7			93
APR	25	512	3.4	5700	.35			7300	30				
MAY	26	567	3.3	6500	.08			5200	31	11.6			69
JUNE	17	525	3.3	7100	.05			14000			44000		
JULY	13	472	2.9	8600	.06			13000	94				
AUG	47	377	2.3	7100	.04			9300	25	29.3	64000		174
SEPT	9	413	2.8	7700	.05			9000		10.8	40000		64
OCT	12	383	2.6	6600	.09			11000	64	56.6			336
NOV	23	453	2.9	3200	.08			6300	69	82.0	39000	67	487
DEC	18	409	2.9	3000	.21			3900	76	40.0	13000		240
TOTAL	250	5495	-	-	-	-	7.2	-	-	281.9	-	-	1676
AVG.	1.3 cu. ft/mil gal	458	3.0	6000	.09			9300	56		40000	67	





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